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Self-Blame in Adolescents Who Have Been Sexually Abused: Factor Structure and Differential Correlates of Abuse-Specific and Global Measures

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Abstract

Self-blame appraisals are frequently studied among adolescents following sexual abuse. However, the conceptualization and operationalization of self-blame varies across studies, with some examining self-blame specific to the abuse and others examining global self-blame. The present study examined the factor structure and theorized correlates of measures of self-blame appraisals among a sample of adolescents who had been sexually abused (N = 493, 91% female). Results of confirmatory factor analyses indicated that a two-factor model, in which abuse-specific and global self-blame appraisals load onto separate factors, produced a superior model fit compared with a single-factor model, though the two factors were highly correlated. Abuse-specific and global self-blame appraisals are differentially associated with theorized correlates, such as experiencing coercion during the abuse. Taken together, the findings suggest that adolescents' abuse-specific and global self-blame appraisals following sexual abuse are measuring distinct constructs.

Keywords

factor structure, confirmatory factor analysis, self-blame appraisals, child sexual abuse

Self-blame—adolescents' belief that they are responsible for or caused an event—is theorized to be a salient predictor of adjustment problems among adolescents following sexual abuse (Finkelhor & Brown, 1985; Spaccarelli, 1994). In line with theory, dozens of studies have documented a link between engaging in self-blame after child sexual abuse and higher levels of trauma symptoms and other types of difficulties (see, Celano et al., 2002; Spaccarelli, 1994; Valle & Silovsky, 2002, for reviews). However, the conceptualization and operationalization of self-blame varies across studies. Many investigators have examined self-blame appraisals specific to the abuse itself (e.g., "I caused the abuse to happen"; Bal et al., 2009; Cantón-Cortés et al., 2012; Daigneault et al., 2006; Feiring & Cleland, 2007; Feiring et al., 2009; McGee et al., 2001; Okur et al., 2019), whereas others have examined more global self-blame (e.g., "I always cause bad things to happen"; Daigneault et al., 2006; Feiring & Cleland, 2007; Feiring et al., 2009; Kolko & Feiring, 2002; Lam, 2015; Mannarino & Cohen, 1996; Wherry & Herrington, 2018). Overlooking differences between abuse-specific and global self-blame appraisals may hinder the ability of both scientists and clinicians to understand the origins and consequences of self-blame appraisals for adolescents after an experience of sexual abuse. The present study investigates the measurement of self-blame, including an examination of the factor structure and correlates of abuse-specific and global self-blame appraisals among adolescents who have been sexually abused.

Self-blame can be conceptualized in multiple ways. It may be that self-blame is best considered a broad, single construct. That is, abuse-specific self-blame may simply be an aspect of a larger construct of global self-blame. For example, adolescents who generally tend to blame themselves when bad things happen might also blame themselves, or believe themselves to be responsible for having been sexually abused (e.g., "I caused the abuse to happen, because I always cause bad things to happen"). From this perspective, global self-blame implies some level of abuse-specific self-blame. It also suggests that abuse-specific and global self-blame may be redundant when examined

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simultaneously as correlates of adolescent adjustment problems, such as trauma symptoms.

Alternatively, it may be that abuse-specific and global self-blame are best conceptualized as separate constructs. That is, abuse-specific self-blame may reflect the child's belief that the abuse was their fault, but not all bad things that happen to them are their fault. Conceptualizing abuse-specific and global self-blame as separate constructs does not mean they are unrelated. For example, children with tendencies toward global self-blame may be more likely than those without such tendencies to also experience abuse-specific self-blame. However, conceptualizing abuse-specific and global self-blame as separate constructs implies that these two types of self-blame appraisals might be expected to correlate differently with other variables.

Abuse-specific self-blame has been theorized to reflect or bolster a sense of autonomy, granting an adolescent confidence that they can have some influence or control over events (Herman, 1992; Kaye-Tzadok & Davidson-Arad, 2016; Mills, 2005). Some have even argued that abuse-specific self-blame increases children's hopefulness about their future (Herman, 1992; Kaye-Tzadok & Davidson-Arad, 2016; Shapiro, 1989). Herman (1992), for example, suggests that when children blame themselves for experiencing abuse, it allows them to think more positively of their parents and preserves a sense of power to change their current circumstances. In contrast, global self-blame may reflect the child's beliefs that he or she is flawed as a person, and that belief is internal, stable, generalizes across contexts, and will lead to more negative events in the future (Weiner & Graham, 1990). That is, global self-blame diminishes children's hopefulness about the future (Valle & Silvosky, 2002), as children believe that there is nothing that they do can protect themselves from future harm. In short, abuse-specific and global self-blame might be differentially associated with hopefulness.

Abuse-specific and global self-blame appraisals are also theorized to have different origins. Abuse-specific self-blame, by definition, is in response to the sexual abuse, and it has been theorized to be associated with certain characteristics of the abuse, such as its severity (often defined as whether the abuse involved penetration; see, Jouriles et al., 2020) and whether it was coerced. For example, some suggest that more severe and coercive sexual abuse is associated with higher levels of abuse-specific self-blame appraisals because adolescents believe that they should have stopped it or prevented it from escalating (Beitchman et al., 1992; Celano et al., 2002). In contrast, global self-blame has been theorized to be a cognitive predisposition or vulnerability that precedes the experience of abuse (Feiring & Cleland, 2007; Peterson & Seligman, 1983). Thus, from the perspective that abuse-specific and global self-blame have different origins and are separate constructs, global self-blame would not be expected to be related to characteristics of the sexual abuse, such as severity or coercion, whereas abuse-specific self-blame would be.

Despite the theorized distinctions between abuse-specific and global self-blame appraisals, much of the empirical literature investigating self-blame for sexual abuse does not distinguish between them. Rather, investigators use the general term *self-blame* regardless of whether the focus is on abuse-specific (e.g., Bal et al., 2009; Cantón-Cortés et al., 2012; McGee et al., 2001; Okur et al., 2019) or global self-blame (e.g., Kolko & Feiring, 2002; Lam, 2015; Mannarino & Cohen, 1996; Wherry & Herrington, 2018). In addition, there are only a handful of studies that explicitly consider both. The results of these studies suggest that abuse-specific and global self-blame are moderately correlated with one another (rs = .19 to .24; Daigneault et al., 2006; Feiring et al., 2009; Simon et al., 2010). This suggests that measures of the two types of self-blame are not capturing a single, broad construct (Chmielewski et al., 2016). Furthermore, when considered simultaneously in analytic models, the two forms of self-blame tend to have differential associations with adolescent trauma symptoms; however, the pattern of these associations does not converge across studies. Some find that only abuse-specific self-blame relates to trauma symptoms (Feiring & Cleland, 2007; Feiring et al., 2009), whereas others find only global self-blame to relate to trauma symptoms (Daigneault et al., 2006). Notably, none of the studies that have examined both types of self-blame have included consideration of their relations to hopelessness or characteristics of the sexual abuse, such as severity and coercion. Such consideration could help refine and extend theory on the role of self-blame in adolescent adjustment after sexual abuse.

The present study considers how best to conceptualize and measure abuse-specific and global self-blame appraisals after sexual abuse. In addition to examining their factor structure, we also examine their associations with adolescent adjustment, hopefulness about the future, and characteristics of the sexual abuse. Although prior research suggests that measures of abuse-specific and global self-blame appraisals likely assess distinct constructs, their factor structure has yet to be empirically examined among a large sample of adolescents who have been sexually abused. Higher order models, which require, at a minimum, three first-order factors, and bifactor models that assume orthogonal, uncorrelated constructs, are incongruous with the proposition that abuse-specific and global self-blame are two separate but related constructs. Therefore, we compare two models: (a) a single-factor model in which abuse-specific and global self-blame items both load onto a single-factor and (b) a two-factor model in which they load onto separate factors. This approach allows assessment of whether abuse-specific and global self-blame are best measured as a single construct or two separate constructs. Based on the moderate correlations between abuse-specific and

global self-blame observed in prior research (Daigneault et al., 2006; Feiring et al., 2009; Simon et al., 2010), we hypothesized that the two-factor model would be superior to the single-factor model.

Using the best-fitting measurement model resulting from the initial model-fitting analyses, we next examined the association between the measure of self-blame and several theorized correlates. Based on previous research, abuse-specific and global self-blame should both be associated with adolescent trauma symptoms, but whether they each contribute uniquely to trauma symptoms or are redundant with one another is unknown. Abuse-specific and global self-blame are hypothesized to be differentially associated with hopefulness about the future and characteristics of the sexual abuse (severity and coercion). Therefore, we specified a structural model to examine the relations of self-blame with measures of adolescent trauma symptoms, hopefulness about the future, and characteristics of the sexual abuse. Finally, because clinicians and researchers typically rely on observed scores (e.g., summed responses to a questionnaire) rather than factor scores to inform treatment decisions and hypothesis testing, we repeated the analysis of these associations using observed self-blame scores. The same hypotheses advanced for the structural model, regarding abuse-specific and global self-blame, were also made with the observed scores.

Method

Participants and Procedures

Participants included 493 adolescents (91% female) aged 11 to 17 years ($M = 13.68$, $SD = 1.85$) seeking services at a children's advocacy center (CAC) in the Southern United States following disclosure of child sexual abuse. Adolescents identified as: 26% Black, 54% Hispanic, 14% White, 5% Multiracial, and 1% American Indian or Alaskan Native. The data were collected as part of a routine assessment conducted by family advocates at the CAC. Most adolescents, 82% completed the assessment within 2 months of the disclosure of the sexual abuse. Research using data from the routine assessments was approved by the Institutional Review Board of the corresponding author's institution. Adolescents completed the assessments in a private room at the CAC. Adolescents included in the study were those who (a) provided assent and (b) were between the ages of 11 and 17 years. In addition, a primary, nonoffending caregiver for the adolescent provided consent for the family's data to be included in research.

Measures

Abuse-Specific Self-Blame. Adolescents reported on eight items from the self-blame subscale of the Negative Appraisals of Sexual Abuse Scale (NASAS; Spaccarelli, 1995) indicating how often they made abuse-specific self-blame appraisals when thinking about the sexual abuse in the past month. Items are presented in Table 1. Responses were recorded on a 4-point scale (0 = *not at all*, 1 = *a little*, 2 = *somewhat*, 3 = *a lot*) and summed to create a total score. The NASAS is one of the few rigorously evaluated measures designed to assess for self-blame appraisals attributed to the experience of sexual abuse among adolescents. This measure has been used in dozens of studies, with evidence of internal consistency across diverse populations of children and adolescents, convergent validity with therapists' and adolescents' reports of abuse-related stress, and discriminant validity with adolescents' reports of other types of negative cognitive appraisals (e.g., negative evaluation by others; see, Atazadeh et al., 2019; Strand et al., 2005, for reviews). NASAS scores have been found to correlate with trauma symptoms among adolescents who have been sexually abused (Bal et al., 2005). In the present sample, $\alpha = .89$.

Global Self-Blame. Adolescents indicated on four items from the Personal Attributions for Negative Events subscale of the Children's Attributions and Perceptions Scale (CAPS, Mannarino et al., 1994) the frequency of global self-blame appraisals in the past month. Items are presented in Table 1. Responses were recorded on a 5-point scale (1 = *never*, 2 = *rarely*, 3 = *sometimes*, 4 = *frequently*, 5 = *always*) and were summed to create a total score. Cited in over 200 peer-reviewed articles, the CAPS is one of the most frequently utilized measures of child and adolescent global self-blame appraisals in the sexual abuse literature (see, Wiseman et al., 2021, for review). CAPS scores have differentiated between control participants and those who have been sexually abused (Mannarino et al., 1994). CAPS scores have also been found to correlate with adjustment problems among adolescent girls who have been sexually abused (Mannarino & Cohen, 1996). In the present sample, $\alpha = .79$.

Trauma Symptoms. Adolescents completed the 12-item posttraumatic stress symptoms subscale of the Trauma Symptom Checklist for Children—Screening Form (TSCC-SF; Wherry & Dunlop, 2017) reporting how often they experience trauma symptoms (e.g., "Can't stop thinking about something bad that happened to me") in the past month. Responses were recorded on a 4-point scale (0 = *never*, 1 = *sometimes*, 2 = *lots of times*, 3 = *almost all of the time*) and summed to create a total score. TSCC-SF scores greater than 18 indicate clinically significant levels of trauma symptoms (Wherry & Dunlop, 2017). TSCC-SF scores have been found to distinguish between adolescents who had been sexually abused and adolescents who had not (Wherry & Herrington, 2018). In the present sample, $\alpha = .89$.

Table 1. Items Assessing Abuse-Specific Self-Blame and Global Self-Blame.

In the past month, in thinking about the sexual behavior that happened to you, did it ever make you think or feel that . . .	
Item label	Item description
AS1	You did something bad or wrong.
AS2	You were not as good as other kids.
AS3	It was your fault.
AS4	It was your fault for trusting too much.
AS5	You are a bad person.
AS6	You are not as good as other kids.
AS7	You make people do bad things.
AS8	You trust people too much.
In the past month,	
Item label	Item description
G1	Do you feel that you make bad things happen to other people?
G2	If something bad happens, are you usually responsible (is it your fault)?
G3	Do you blame yourself when things go wrong?
G4	Do you feel that you do or say things that cause other people to get into trouble?

Note. AS1 to AS8 are items measuring abuse-specific self-blame; G1 to G4 are items assessing global self-blame.

Hopefulness About the Future. Adolescents completed the six-item optimism subscale of the Revised Life Orientation Test (LOT-R; Creed et al., 2002) reporting how often they have felt hopeful (e.g., "In uncertain times, I usually expect the best") in the past month. Responses were recorded on a 5-point scale (1 = *totally false*, 2 = *mostly false*, 3 = *neither true nor false*, 4 = *mostly true*, 5 = *totally true*) and summed to create a total score. LOT-R scores have been previously demonstrated to distinguish between adolescents who had clinically severe levels of depression and anxiety and those who did not (Dooley et al., 2015). In the present sample, $\alpha = .65$.

Abuse Characteristics (Severity and Coercion). Information about the severity of the sexual abuse was coded from recordings of the CAC's forensic interview of the adolescent and from participant CAC clinical and forensic records. Consistent with previous research (e.g., Jouriles et al., 2020) severity of the sexual abuse was defined as whether or not penetration (e.g., "digital or object penetration" or "vaginal or anal intercourse") occurred. Severity was coded dichotomously, 0 = *no penetration* and 1 = *penetration*. Interrater reliability was assessed on 25%, $K = .82$.

To assess coercion, adolescents reported on the four-item coercion subscale of the Checklist of Sexual Abuse and Related Stressors (CSARS; Spaccarelli, 1995) reporting whether the alleged abuser used threats or physical force (1 = *no*, 2 = *yes*). Responses were summed to create a total score. Higher scores on adolescent reports on the CSARS coercion subscale have previously been associated with higher levels of trauma symptoms (Bi et al., 2019). In the present sample, $\alpha = .72$.

Data Analysis

To test the first hypothesis, that abuse-specific and global self-blame are best measured as separate constructs, we conducted confirmatory factor analyses (CFAs) to evaluate and compare the fit of the two-factor and the single-factor models. Because previous research indicates that the two forms of self-blame are correlated, we allowed them to covary in the two-factor model. A missing values analysis across all items indicated minimal missing data (<1.0%). Furthermore, Little's (1988) test of missing completely at random (MCAR) was not significant, $\chi^2 = 241.00$, degree of freedom (*df*) = 254, $p = .71$, indicating that we did not find evidence to suggest that the data collected were not MCAR. Nonetheless, the missing data were managed through a multiple imputation procedure. Missing data for each of the self-blame items and the theorized correlates were imputed. The factor indicators assessing abuse-specific self-blame had approximately 0.40% missing data and the indicators assessing global self-blame had 0.20% missing data. Among the theorized correlates, trauma, hopefulness about the future, abuse severity, and coercion, had approximately 0.8%, 1.0%, 0.0%, and 0.2%, missing data, respectively. All of the items measuring self-blame, trauma, hopefulness about the future, and coercion were used to create the imputed data sets. Abuse severity was used as an auxiliary variable. We treated the factor indicators as categorical dependent variables in both model estimation and

multiple imputation. The chained regression model was specified as the imputation model, and we imputed 10 complete data sets. For model estimation, we used the weighted least square mean and variance-adjusted estimation as it does not assume normally distributed variables and is recommended for categorical data (Brown, 2006). While there is some disagreement on the required sample size to conduct CFA, our present sample ($N = 493$) surpasses Tabachnick and Fidell's (2007) conservative suggestion of a minimum of 300 participants. Analyses, including multiple imputation and pooling results, were conducted using M*plus* Version 8.4 (Muthén & Muthén, 2009).

We compared the goodness-of-fit indices across these models by examining the root mean square error of approximation (RMSEA), the 90% confidence interval (CI) for RMSEA, the standardized root mean square residual (SRMR), the comparative fit index (CFI), and the Tucker–Lewis index (TLI). According to Browne and Cudeck (1993), RMSEA values less than .05 indicate good fit, and values between .05 and .08 indicate a reasonable fit. Hu and Bentler (1999) suggest that SRMR scores less than .08 indicate acceptable fit; both CFI and TLI scores greater than .90 indicate a reasonably good fit, and scores greater than .95 indicate a good fit. Furthermore, we conducted a chi-square difference test comparing the nested single- and two-factor models, to provide further quantitative information about their relative fit.

Inspection of the modification indices for both initial models suggested that allowing the error terms between Item 2 on the Abuse-Specific Self-Blame Scale "You were not as good as other kids" and Item 6 "You are not as good as other kids*"* to covary would improve model fit. Therefore, we specified covariation of these two error terms and recomputed the model (Whittaker, 2012).

We then examined the best fitting factor model in a structural equation model to assess the pattern of associations of the self-blame latent constructs with the theorized correlates—trauma symptoms, hopefulness about the future, and characteristics of the sexual abuse experience (severity and coercion). Finally, we computed the same structural model, using observed scores, rather than latent factors for the abuse-specific and global self-blame variables. We did this to determine whether the observed pattern of associations in the latent variable analysis would replicate using observed scores. We report R^2, the variance explained for each correlate by the full model, as a measure of effect size.

Results

Sample Characteristics

Approximately half of the adolescents 51% indicated that their sexual abuse involved penetration, and 57% reported that the alleged perpetrator used coercion. Approximately 38% of adolescents reported experiencing clinically significant levels of trauma symptoms at the time of the assessment.

Table 2. Model Fit Indices Across the Single-Factor and Two-Factor Models.

Index	Single-factor model	Two-factor model
RMSEA [90% CI]	.13 [.12, .14]	.10 [.09, .11]
p for RMSEA	<.001	<.001
CFI	.95	.97
TLI	.94	.96
SRMR	.07	.05

Note. $N = 493$. Preliminary examination of the fit indices. All models included the error covariance between abuse-specific self-blame Item 2 and abuse-specific self-blame Item 6. RMSEA = Root mean square error of approximation; CI = confidence interval; CFI = comparative fit index; TLI = Tucker–Lewis index; SRMR = standardized root mean square residual.

Confirmatory Factor Analyses and Comparison of Model Fit

Fit indices for the single-factor and two-factor models are summarized in Table 2. The two-factor model produced a better fit across all goodness-of-fit indices, RMSEA [90% CI] = .10 [.09, .11], CFI = .97, TLI = .96, SRMR = .05, compared with the single-factor model, RMSEA [90% CI] = .13 [.12, .14], CFI = .95, TLI = .94, SRMR = .07. The chi-square difference test similarly indicated that the two-factor model demonstrated better fit than the single-factor model, $\Delta\chi^2(1) = 196.81$, $p < .05$.

The standardized factor solutions for the two-factor model are reported in Figure 1. According to Tabachnick and Fidell (2007), thresholds for evaluating standardized factor loadings are: .32 (poor), .45 (fair), .55 (good), and .71 (excellent). Factor loadings for the abuse-specific self-blame factor ranged from .62 to .91, with seven of the eight in the excellent range. Factor loadings for the global self-blame factor ranged from .67 to .86, with two in the excellent range. The abuse-specific and global self-blame factors were strongly correlated, $r = .78$.

Associations Between Theorized Correlates and the Two-Factor Model

Means, standard deviations, and correlations are presented in Table 3. The specification of the structural model and the results of the model fitting are summarized in Figure 2. The model demonstrated reasonably good fit across most of the fit indices, RMSEA [90% CI] = .08 [.07, .09], CFI = .97, TLI = .96, SRMR = .05. In this model, greater abuse-specific self-blame was associated with higher levels of trauma symptoms, $b = 0.15$, $p = .02$, and the alleged perpetrator's use of coercion ($R^2 = .09$), $b = 0.34$, $p < .001$, but was not associated with hopefulness about the future,

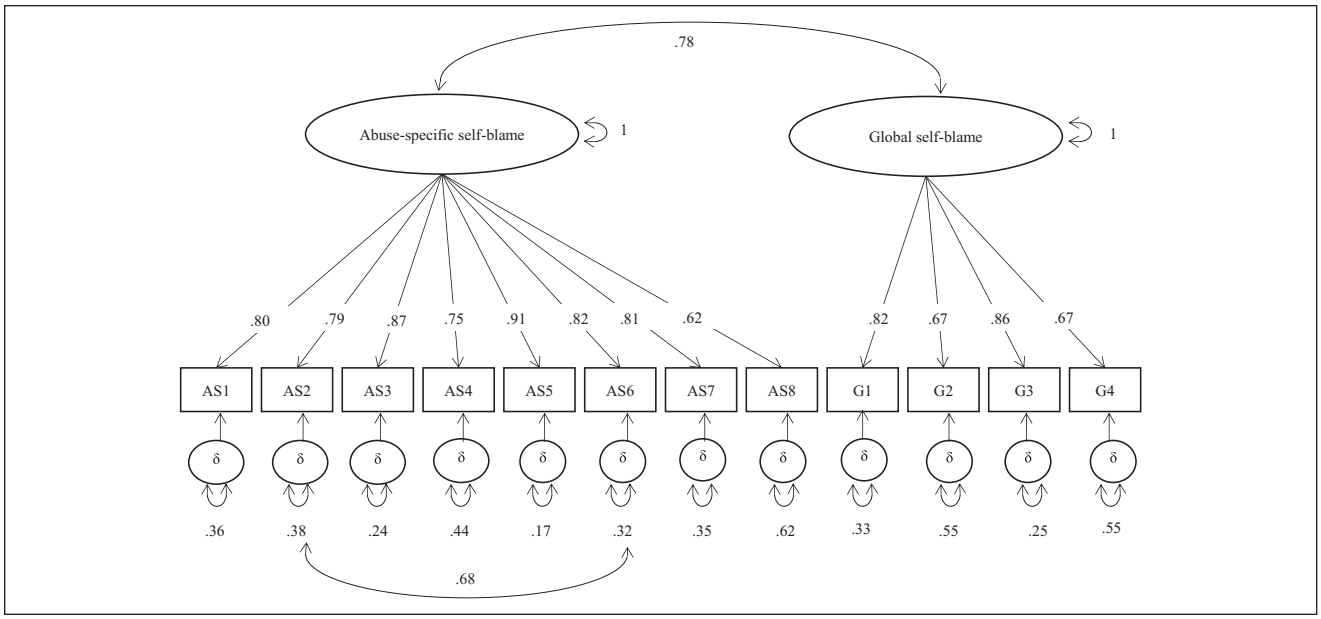

Figure 1. Two-factor model with standardized factor solutions.
Note. $N = 493$. Standardized solutions are depicted. AS1 to AS8 are items measuring abuse-specific self-blame; G1 to G4 are items assessing global self-blame. Root mean square error of approximation (RMSEA; 90% confidence interval [CI]) = .10 [.09, .11], comparative fit index (CFI) = .97, Tucker–Lewis index (TLI) = .96, standardized root mean square residual (SRMR) = .05.

Table 3. Means, Standard Deviations, and Correlations Among Study Variables.

Variable	1	2	3	4	5	*M* (*SD*)
1. Trauma symptoms	—					15.60 (8.22)
2. Hopefulness about the future	−.51**	—				17.92 (4.49)
3. Severity (0 = *no penetration*, 1 = *penetration)*	.004	−.01	—			—
4. Coercion	.26**	−.10*	.23**	—		5.19 (1.32)
5. Abuse-specific self-blame	.55**	−.46**	.11*	.29**	—	18.39 (7.08)
6. Global self-blame	.60**	−.53**	.07	.20**	.64**	9.77 (3.94)

Note. $N = 493$.
*$p < .05$. **$p < .001$.

$b = -0.08$, $p = .28$, or abuse severity, $b = 0.12$, $p = .20$. Greater global self-blame was associated with higher levels of trauma symptoms ($R^2 = .46$), $b = 0.55$, $p < .001$, and lower levels of hopefulness about the future ($R^2 = .34$), $b = -0.52$, $p < .001$, but was not associated with abuse severity ($R^2 = .01$), $b = -0.01$, $p = .90$, or the alleged perpetrator's use of coercion, $b = -0.06$, $p = .51$.

Associations Between Theorized Correlates and Observed Self-Blame Scores

The specification of the structural model of the observed self-blame scores and model fitting are summarized in Figure 3. The model demonstrated reasonably good fit across most of the fit indices, RMSEA [90% CI] = .10 [.04, .18], CFI = .99, TLI = .88, SRMR = .02. In this model, greater abuse-specific self-blame was associated with higher levels of trauma symptoms ($R^2 = .40$), $b = 0.28$, $p < .001$, lower levels of hopefulness about the future ($R^2 = .30$), $b = -0.21$, $p < .001$, and the alleged perpetrator's use of coercion ($R^2 = .08$), $b = 0.28$, $p < .001$, but not abuse severity ($R^2 = .01$), $b = 0.10$, $p = .10$. Greater global self-blame was associated with higher levels of trauma symptoms, $b = 0.42$, $p < .001$, and lower levels of hopefulness about the future, $b = -0.39$, $p < .001$, but was not associated with abuse severity, $b = 0.01$, $p = .91$, or the alleged perpetrator's use of coercion, $b = 0.02$, $p = .69$.

Discussion

The current study investigated the factor structure of self-blame appraisals among adolescents who have been sexually abused. Analyses compared whether measures of abuse-specific and global self-blame are best conceptualized as a

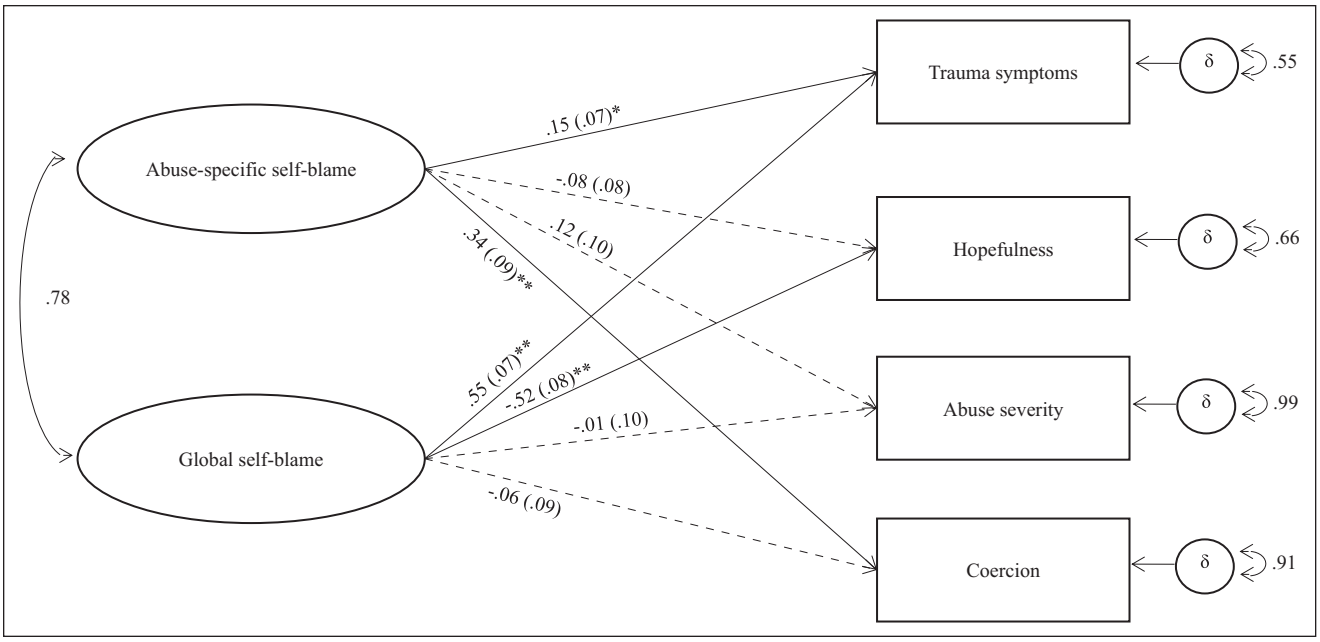

Figure 2. Structural model evaluating theorized associations with the two-factor model.
Note. $N = 493$. Standardized solutions are depicted. Solid lines reflect statistically significant path coefficients, and dashed lines reflect nonsignificant path coefficients. Root mean square error of approximation (RMSEA; 90% confidence interval [CI]) = .08 [.07, .09], comparative fit index (CFI) = .97, Tucker–Lewis index (TLI) = .96, standardized root mean square residual (SRMR) = .05.
*$p < .05$. **$p < .001$.

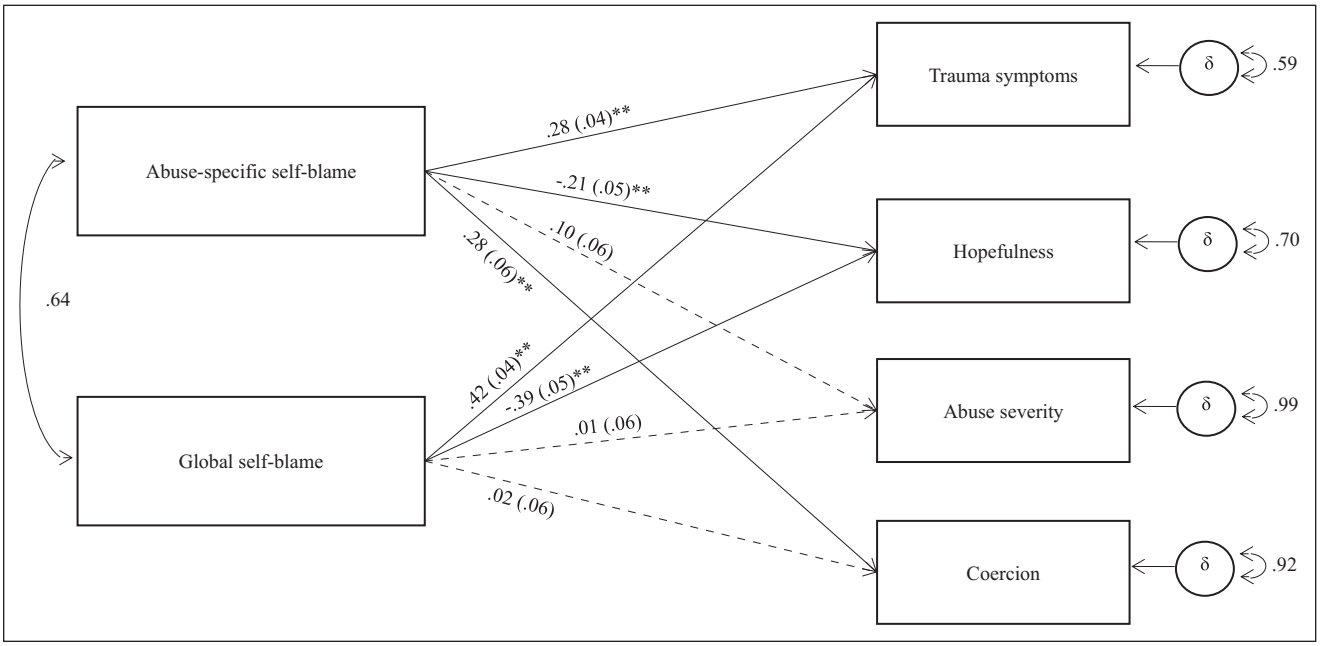

Figure 3. Structural model evaluating theorized associations with observed self-blame scores.
Note. $N = 493$. Standardized solutions are depicted. Solid lines reflect statistically significant path coefficients, and dashed lines reflect nonsignificant path coefficients. Root mean square error of approximation (RMSEA; 90% confidence interval [CI]) = .10 [.03, .18], comparative fit index (CFI) = .99, Tucker–Lewis index (TLI) = .88, standardized root mean square residual (SRMR) = .02.
**$p < .001$.

single construct or two separate constructs. The pattern of model-fitting results suggests that they are better measured as two separate, but related, constructs. The present findings extend the theoretical literature that differentiates between these two types of self-blame appraisals and suggests that future research would benefit from greater conceptual clarity regarding self-blame, especially in relation to sexual abuse.

The results of the structural model analyses examining the two-factor model of self-blame indicate that the two types of self-blame are differentially related, in important ways, to theoretically relevant variables. This also lends credence to conceptualizing them as separate constructs, despite the strength of their association with one another. In the two-factor model, with both forms of self-blame included as predictors, abuse-specific self-blame was positively associated with trauma symptoms and the alleged perpetrator's use of coercion, whereas global self-blame was positively associated with trauma symptoms, negatively associated with hopefulness about the future, and unrelated to characteristics of the abuse. This pattern of findings is consistent with the theoretical conceptualization of abuse-specific and global self-blame as having different origins (Beitchman et al., 1992; Peterson & Seligman, 1983), the former being a reaction to the abuse, and the latter being a predisposing vulnerability that increases risk for trauma and is not influenced by the characteristics of the abuse. This conceptualization contributes to a refinement of our understanding of risk factors for poor outcomes following adolescent sexual abuse.

In examining the associations with the two observed self-blame variables, with both abuse-specific and global self-blame scores entered as predictors, both types of self-blame were positively associated with trauma symptoms and negatively associated with hopefulness about the future. When considered in light of the latent variable findings, this suggests the possibility that the measure of abuse-specific self-blame may also be capturing aspects of global self-blame, or, as theorized, some, but not all, of abuse-specific self-blame may be casually or otherwise related to global self-blame. That only abuse-specific self-blame was positively associated with coercion is again consistent with theory that the nature or characteristics of the abuse contribute to an adolescent's sense of responsibility for having caused it or failed to stop it (Beitchman et al., 1992; Celano et al., 2002). The differences across the two latent and observed analyses suggest pursuing research to better delineate the nature of and causal pathways between abuse-specific and global self-blame.

Abuse-specific self-blame was negatively associated with hopefulness about the future—paralleling the direction and magnitude of the association observed for global self-blame. This finding is noteworthy because it is inconsistent with theory suggesting a possible silver-lining for abuse-specific self-blame. Specifically, it has been suggested that children who blame themselves for abuse may be more optimistic about their future, than those who do not blame themselves, partly because they believe that they can influence their future by changing themselves or their behavior (Herman, 1992; Kaye-Tzadok & Davidson-Arad, 2016; Shapiro, 1989). Our findings, however, suggest that both forms of self-blame contribute to lower levels of optimism about the future. In short, additional research seems needed to test theory that suggests adolescent self-blame for sexual abuse is related to their hopefulness about the future, and other positive perceptions.

Collectively, an important implication of our findings for researchers and clinicians is the utility of measuring both abuse-specific and global self-blame, and conceptualizing them as separate constructs. Treating them as redundant, interchangeable, or considering one without the other may lead to erroneous inferences being made about their relations to important outcomes or to precursors of self-blame after sexual abuse. Indeed, it is possible that different treatment approaches may be necessary to change abuse-specific self-blame appraisals, which are related to aspects of the abuse, versus global self-blame appraisals, which may be dispositional and thus more challenging to address. Measuring both types of self-blame appraisals in clinical settings can better inform effective treatment decisions.

In the current study, abuse-specific and global self-blame appraisals were strongly correlated, latent variables, $r = .78$; observed variables, $r = .64$. The magnitude of their association is considerably greater than has been documented in prior studies (Daigneault et al., 2006; Feiring et al., 2009; Simon et al., 2010). One possible explanation for the strong correlation observed in our study is the timing of the assessment of self-blame appraisals in relation to the disclosure of sexual abuse. More than 80% of adolescents in the present study completed the assessment within 2 months of disclosing the sexual abuse. In prior research, the period of time between the disclosure of sexual abuse and assessment of self-blame appraisals is generally much longer, between 1 and 6 years (Feiring et al., 2009; Simon et al., 2010). It seems plausible that recent disclosure of the abuse may have primed adolescents to conflate the two forms of self-blame. Furthermore, the context of the assessment, at a CAC where families were seeking services because of the sexual abuse, may have further primed adolescents to answer questions while thinking about the sexual abuse, leading to stronger associations across both types of self-blame. Thus, future replication of the CFA findings among samples of adolescents who have been sexually abused, outside the context of a CAC over longer assessment periods, may be valuable to further illustrate the importance of measuring abuse-specific and global self-blame as distinct constructs.

Several limitations to the present research should be noted. The data for the study were cross-sectional, so our investigation of the associations between theorized correlates and self-blame were limited to variables assessed

concurrently. It is unknown how the identified two-factor model of abuse-specific and global self-blame may differentially predict adolescent adjustment problems over time. Similarly, the cross-sectional assessment precluded evaluation of whether global self-blame predates the experience of child sexual abuse, as theorized. It is possible that global self-blame develops as a maladaptive trauma response, similar in origin to abuse-specific self-blame. Another limitation was the small number of males in the sample, which precluded exploration of gender differences in the factor structure of self-blame across males and females. However, most studies examining sexual abuse self-blame appraisals have found no gender differences (Hunter et al., 1993; McGee et al., 2001) and theory does not suggest that there should be such differences. It should also be acknowledged that there are considerable redundancies in the wording of items used to measure abuse-specific self-blame. Item redundancy results in inflated interitem correlations and raises questions about whether the items, as a set, measure the full breadth of the construct in an efficient manner.

In conclusion, this study helps refine our understanding of measuring adolescent self-blame appraisals and how they relate to other important variables following sexual abuse. Conceptualizing and operationalizing abuse-specific and global self-blame as separate, but related, constructs appears superior to treating them as a single, unitary construct, as evidenced both in terms of basic measurement (the two-factor model was superior in fit to the one-factor model) and in their differential associations with adolescent adjustment problems and the alleged perpetrator's use of coercion during the sexual abuse. Researchers may wish to consider these findings in deciding how best to conceptualize and measure self-blame, and clinicians may wish to consider them in planning assessment and treatment for adolescents who have been sexually abused.

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